DOCUMENT RESUME

ED 247 905 IR 011 255

AUTHOR Perraton, Hilary
TITLE The National Correspondence College of Zambia and Its Costs.
INSTITUTION International Extension Coll., Cambridge (England).
REPORT NO ISBN-0-903632-33-0
PUB DATE Dec 83
NOTE 19p.
AVAILABLE FROM International Extension College, 18 Brooklands Avenue, Cambridge CB2 2HN, England (2 British pounds per copy).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Class Organization; *Correspondence Study; *Cost Effectiveness; Cost Estimates; *Developing Nations; Distance Education; Economic Factors; *Educational Radio; Foreign Countries; Program Descriptions; Secondary Education; *Study Centers
IDENTIFIERS *National Correspondence College (Zambia); Zambia

ABSTRACT

The organization of the college, its services, student learning procedures, and economic considerations are described in this report. Background information summarizes the dramatic expansion of Zambia's educational system and the country's unfulfilled demand for secondary education. Efforts of the National Correspondence College's efforts to meet this demand through secondary level correspondence courses are outlined, including its support of traditional mail correspondence through supervised study groups and radio programs. Tables illustrate the trend for an increasing proportion of students to work in supervised study group (SSG's). A 1982 radio broadcast timetable is also included. Academic staff functions are described, including correspondence course writing and revision, preparing radio broadcasts, and supervising work for part-time students. Administrative staff responsibilities are also summarized. Student home study procedures are explained, as well as work in SSG's, and a brief account of an actual SSG meeting is provided. Capital equipment and annual recurrent costs are examined and summarized in tabular form, and costs per supervised study center are estimated. Costs per student in an SSG are compared with equivalent costs in regular secondary schools, and the academic results of the two systems are compared. Seven references are listed. (LMM)

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Hilary Perraton

THE NATIONAL CORRESPONDENCE COLLEGE OF ZAMBIA AND ITS COSTS

International Extension College

December 1983

IR011253

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International Extension College
18 Brooklands Avenue
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ISBN 0 903632 33 0

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Printed by the National Extension College
18 Brooklands Avenue
Cambridge
CB2 2HN
England

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ACKNOWLEDGMENTS

I am indebted to Dr Solomon Inquai, who collected information for this case study on a visit to Luanshya in 1982; to many officers of the Zambian education service for information which fed into it and discussions about it; and to Mr Aldridge Adamson and Mr Gordon Leech, of the Namibian Extension Unit, for help in locating information about the College; and to colleagues, at IEC in England, and in Zambia, who commented on the draft. Preparation and publication of the case study was made possible by a grant from the Commission of the European Communities. Responsibility for the content is my own and it does not necessarily represent the view of the Government of Zambia or of the International Extension College.

BACKGROUND DATA ON ZAMBIA

Location	:	landlocked country in central Africa
Area	:	753 000 square kilometres
Population	:	5.8 million (1981)
GNP per head	:	$600 (1981)
Currency	:	Kwacha In July 1981 K1.70 = £1.00 K0.90 = $1.00

Percentage of age group enrolled in education 1980	:	primary	secondary	higher
		95	17	2

Urban population	:	38% (1980)
Population of working age (15-64)	:	50% (1981)
Political status	:	one-party parliamentary democracy

1. BACKGROUND

Zambia is a one-party democracy in central Africa. Much of the country is agricultural, with a low density of population, but its Copperbelt is urbanised and depends on mining. Population is concentrated along the line of rail which runs north from the capital, Lusaka, through the Copperbelt. Zambia became independent in 1964 and looked forward to prosperity from its mineral wealth. These hopes were dashed partly by the slump in world copper prices, and partly by Ian Smith's unilateral declaration of independence in Zimbabwe (then Southern Rhodesia): the cost of maintaining sanctions against the Smith regime put heavy burdens on Zambia's economy. On independence in 1964 Zambia was faced with the urgent need to expand education. As the Secretary-General of the official party (UNIP) said:

> Primary education had to be expanded extensively. Secondary education, which had barely existed during the colonial era, had to be expanded at a rate fast enough to cope with the demands for this type of education. There were hardly one hundred university graduates at Independence and we had no university, so we created one.
>
> (quoted in Ministry of Education 1976, p.77)

Zambia has expanded its educational system dramatically. Primary school enrolments more than doubled in the ten years after independence, so that by the late 1970s about 90% of children were going to primary school. In the same decade secondary enrolments went up by more than four times. Today Zambia has a higher proportion of children in secondary schools than most countries in the region.

The country has also been willing to experiment with unorthodox ways of expanding education. From its outset the University of Zambia has been committed to offering degree courses by correspondence. At secondary level the Zambian National Correspondence College, part of the Ministry of Education, has been providing correspondence courses since 1965. Its original intention was to provide an alternative route to secondary education, which would give opportunities for those who had no chance of entering a regular secondary school. That purpose remains: despite the expansion of secondary schools, the increased number of children completing primary education means that there remains an unfulfilled demand for secondary education. In 1980, for example, there was only one place in form one at secondary level for every six children leaving primary school. This imbalance has now led the Zambian government to reorganise junior secondary education. But, over the last fifteen years, the National Correspondence College has been trying to meet the unfulfilled demand.

It has done so by providing correspondence courses at secondary level, equivalent to the courses taught in the first years of regular secondary schools.

2. HOW THE COLLEGE WORKS

The College was established, as a correspondence course unit, as early as 1964 and was then based in the Evelyn Hone College, a government college in Lusaka. In 1966 it moved to Luanshya on the Copperbelt, but continued to have the aim of providing courses for students throughout Zambia. Its objectives are formally defined as:

(a) to offer secondary education to teachers with professional training but lacking the required academic qualifications;

(b) to offer secondary education to other adults wanting to pursue further academic education leading to certification. This is directed mainly at those in employment to help them take up responsible jobs in the public and private sectors;

(c) to offer secondary education to primary school leavers who fail to enter the formal secondary school system.

(Siaciwena 1981, p.17)

It seems that the original plans were for a correspondence college which would teach simply by sending lessons through the post to individual students. This model, in which the student's sole educational support is the corresondence lesson, is the one developed in Europe, America and Australasia for small minorities of highly motivated students who have already had a good foundation of primary and lower secondary education. It proved an inappropriate model in Zambia, as elsewhere; many students at secondary level need more support than that. For this reason the College has, since 1972, been providing courses both to individuals and to groups of students who come together in 'supervised study groups'. The Ministry of Education hoped that this arrangement would help the College meet the needs of students who had finished the seven-year primary course but could not find a place in secondary school.

At Luanshya the College has a staff of about 100, including a Principal, Vice-Principal, about twelve academic staff and about eight supervisory and administrative staff. The College also employs part-time tutors: there are between 20 and 30 of these for each subject which the College teaches. They are all teachers living in the Luanshya area.

The College provides courses for examinations at two levels; Junior Secondary (JS), which is taken by full-time students after three years of secondary education, and General Certificate of Education Ordinary Level (GCE), which is normally taken two years later. Courses cover the main subjects of the regular secondary school curriculum. At JS level they are available in English, mathematics, history, geography, health science and civics and at GCE in English, mathematics, history, geography, human biology, economics and commerce. While the JS examination is grouped, and students have to take six subjects, in GCE there is a choice.

Tables 1 and 2 show the numbers of students and the choice of GCE subjects. They also show the trend for an increasing proportion of students to work in supervised study groups.

The correspondence courses are supported by radio programmes: Figure 1 shows the 1982 timetable of broadcasts of interest to correspondence students. The programmes broadcast in the evening are aimed specifically at this group of students.

Table 1 : Enrolments at NCC

Year	Junior Secondary (directly enrolled)	GCE 'O' Level	SSG a/	RO b/	Total
1964	129	-	-	-	129
1965	126	-	-	-	126
1966	143	-	-	-	413
1967	2 000	-	-	50	2 050
1968	3 000	169	-	109	3 278
1969	-	-	-	-	-
1970	-	-	-	-	-
1971	2 576	1 278	-	136	3 990
1972	1 038	551	1 325	-	2 914
1973	3 500	3 000	2 000+	-	8 500+
1974	7 550	5 250	5 500	-	18 300
1975	7 912	6 187	6 960	-	21 059
1976	9 650	6 633	9 644	-	25 927
1977	29 035		6 238	-	35 273
1978	10 955	8 040	8 988	506	28 489
1979	-	-	12 629	418	33 000+
1980	-	-	-	393	32 000

Source : Siaciwena 1981, p.18

Notes :

a/ SSG = supervised study group
b/ RO = referred students (those who have passed 3 or 4 subjects of the Junior Secondary Certificate and are given a second chance so that they can pass the required 6)
- = not available

Table 2 : Choice of GCE subjects by NCC students 1978

Subject	Proportion of GCE enrolments %
English language	32.44
Human biology	17.35
Economics	13.30
History	10.10
Mathematics	11.44
Geography	8.84
Commerce	6.61

Source: National Correspondence College (1978)

Term 1: 18 January - 26 March Term 2: 17 May - 30 July Term 3: 13 September - 5 November

Time	Monday	Tuesday	Wednesday	Thursday	Friday
14.05-14.20	-	JS history (external)	-	-	-
14.20-14.35	-	-	-	Form 1 English	University of the Air (R)
			G E N E R A L I N T E R L U D E		
14.40-14.50	-	-	Form 3 civics (R)	-	-
14.55-15.10	Form 1 civics	Calling school teachers	-	JS geography (external)	JS English in action (R)
15.10-15.25	Home study magazine	Form 2 civics	JS correspondence course English	JS health science (R)	JS correspondence course English (R)
**********	**********	**********	B R E A K	**********	**********
18.25-18.40	JS health science	Form 3 civics	University of the Air	Form 2 civics	GCE 'O' level Commonwealth history (R)
18.40-19.00	Form 2 English	Form 3 English	Senior secondary English	-	Science for teachers
19.00-19.15			N E W S R E E L		
19.15-19.30	JS geography (external)	GCE 'O' level Commonwealth history	Home economics	GCE 'O' level economics	JS history (external)
19.30-19.45	JS English in Action	Focus on curriculum development	For teachers	Home study magazine (R)	Calling school teachers (R)

Source : National Correspondence College

N.B. Saturday broadcasts
14.30-14.45 : GCE 'O' level economics (R)
14.45-15.00 : Home study magazine (R)

Note: R = repeat

FIGURE 1 : EDUCATIONAL RADIO BROADCASTS OF INTEREST TO CORRESPONDENCE STUDENTS, 1982

The academic staff of the College have three main jobs. First, they write and revise the correspondence courses. There is a policy of continuously revising and updating courses, although there are practical difficulties in implementing this. Some of these come from a shortage of resources. Some spring from inevitable changes to the programme of revision; syllabus changes, or books going out of print, mean that a revision must be undertaken urgently. In 1978, for example, the College decided that the difficulties of supplying English textbooks to students were so great that the course should be rewritten so that it no longer depended on textbooks.

The academic staff's second function is to prepare broadcasts for their students. NCC staff members write scripts and the programmes are broadcast through the Educational Broadcasting Services of Radio Zambia. As Figure 1 shows, radio programmes are used both for teaching and to provide more general educational advice and encouragement to students.

Third, the College's subject specialists supervise the work of their part-time tutors. They check a considerable number of the students' scripts, after these have been marked by part-time tutors, and where necessary contact the tutor to give advice on marking and tutoring. The academic staff also do some in-service training of part-time tutors.

The administrative staff have responsibilities of four kinds. First, they counsel and advise students; a group of four staff advise students, answer enquiries from them and process enrolment forms. Second, there are staff concerned with the storage and distribution of teaching materials. Third, as in any correspondence college, administrative staff maintain the necessary record systems. Finally the College has printing and assembly sections, who print and collate lessons, and keep in touch with the outside printers who print some of the College's lessons.

3. HOW THE STUDENTS WORK

In principle, anyone can enrol with the College. Most students fall into one of three groups. The largest consists of primary school leavers who cannot get into a secondary school. Then there are some who have taken Junior Certificate, but not passed in all subjects, and so need to continue their study at this level. Third, the College attracts some older students who, as adults, want to obtain or improve their academic qualifications. Table 3 shows the occupations of students in 1978.

Table 3 : Occupations of NCC students 1978

	JS (%)	GCE (%)
Teachers	6.67	28.35
Civil servants	9.10	19.23
Police officers	7.11	5.97
State enterprise	12.53	14.34
Miners	10.41	6.88
Armed forces	7.67	4.97
Unemployed	23.64	11.52
Others	22.89	8.70

Source: National Correspondence College (1978)

It seems that school leavers were included in the figure for the unemployed and it is striking that over three-quarters of the College's students are already at work and seeking to improve their qualifications at the same time.

Students who work at home receive a correspondence course from the College which usually consists of up to 30 lessons.

> The basic pattern of each lesson is a series of topics, with reference to textbooks where used... and exercises interspersed. These exercises are for self-checking and the answers are given at the end of the lesson text. Each lesson then concludes with a written work assignment which, except for some later GCE lessons, is in the form of a separate worksheet. These are printed on coloured paper to distinguish them,* and in most subjects have spaces for the answers. They are to be detached and sent in for marking. When marked work is returned model answers are sent with it.
>
> (Leech 1970)

The students send their work to the College; the College staff then pass it on to their part-time tutors, receive it back from the tutors, check and record the marks, and send it back to the students.

To enrol, students in 1981 paid a fee of K10 per year for years 1 and 2 of the Junior Certificate course and K5 in the third year.

The College tries to provide students with the necessary textbooks and reference books (notably dictionaries and atlases), but a shortage of supplies means that not all students have received these and in 1978 'many GCE and JS students studied their courses without books' (NCC 1978). The College also has a library service so that students can borrow books.

As we have seen, individual students work by themselves, at home. Others work in supervised study groups, as an alternative either to working at home or to attending a regular school. Children who do best in the primary school leaving examination enrol in regular secondary schools. Those who do not do as well are encouraged to join a supervised study group. They meet in the morning or afternoon, usually at a primary school, but in some cases at a secondary school. Here they work individually on their correspondence lessons under the guidance of a supervisor. The supervisors maintain registers, supervise the students' work, and look after communication between the study centre and the College. But they do not teach the students: at most they will try to help students who have difficulty in understanding their correspondence lessons. The teaching has to come from the printed lessons, and from the radio programmes. Many of the supervisors are primary school teachers and, in general, they do not have the qualifications required for secondary teaching.

As the supervised study group programme has developed, some centres have been able to offer rather more support to their students, so that the centre is run more as part of the school than as an extra, outside, activity. We look at the financial implications below.

What is a study group like? Tony Dodds, who went unannounced to visit a

---

* The cost and shortage of paper in Zambia means that coloured paper is no longer used.

number of them around Lusaka, gave this description:

> Of course they vary, and those I saw in Lusaka may not be typical of the whole country. Some are in primary schools and some in secondary, although working at different times of the day. There is an urge - which comes from parents and students - to make them as like schools as possible, so some of them have uniforms and they've started branches of the Student Christian Movement and so on. The students are mostly in their mid teens but with quite a wide age range.
>
> Often the schools run two separate groups, one for form 1 and one for form 2. Classes are generally quite large, with 30 to 40 students. The supervisors vary. They are mainly primary school teachers. All of them spend some time sitting, keeping the register, and maintaining order. The better ones spend a lot of time walking round, helping students with individual problems. Some of them do call the whole group together, to work out a problem on the board, when it's clear everybody needs help with the same thing.
>
> The delivery system was working all right. Students had got their lessons and the supervisor usually had a cupboard in the staffroom to keep their things. Most seemed to have the supervisor's handbook at the ready.
>
> On the whole we were impressed - more so than I'd expected. Most of it seemed to work, with some quite good supervisors, interested in doing something, and many many very enthusiastic and hard-working students.

4. THE ECONOMICS OF THE COLLEGE

By looking at what the College does, how much capital it uses, and how much it costs each year, it is possible to make an economic assessment of the College and to present some comparison with the work of regular secondary schools.

In doing this we have followed what is becoming a standard procedure for such studies, which is discussed in more detail by Jamison, Klees and Wells (1978) in their book The costs of educational media. Briefly, we have tried to put together both the capital and the recurrent costs for the College. To do this, it is necessary to work out the annual cost of the capital employed in the College, for its equipment and vehicles and so on. By an annual cost we mean something equivalent to the rent which the College would have to pay if it hired all its equipment. We have assumed that one should take into account a notional interest rate on the capital employed in the College and have used a figure of 7.5% for this. In order then to convert capital to annual costs we have asked about the value of equipment, and about its life, and used a standard formula* to do the calculation. We then need to calculate the recurrent costs of the College - the annual costs for salaries, rent and materials which are incurred year by year.

---

* $a(r,n) = [r(1 + r)^n]/[(1 + r)^n - 1]$
where $a(r,n)$ = annualisation factor
n = lifetime of capital in years
r = prevailing interest rate or discount rate

In 1981 the College reported a total enrolment of 33 000 with 11 794 in supervised study groups. The College was housed in a rented building and had two vehicles, a quantity of 16-year-old printing equipment, 11 typewriters which have also long been in service, and two recent electric typewriters. Using our standard formula for annualisation, we can therefore set out the capital costs, from the information provided at Luanshya, as in Table 4.

Table 4 : Capital equipment at NCC Luanshya

Currency: 1981 Kwacha

item	purchase price	price adjusted for inflation	life in years	annual cost @ 7.5%
Building rent				7 811
Pick-up	16 000	20 000	5	4 943
Land Rover		14 000	5	3 460
Itec camera	8 000	24 000	20a/	2 354
4 duplicators	1 200	6 000	20a/	586
5 offset printers	15 000	35 000	20a/	3 433
scanner		2 000	20a/	195
11 typewriters		6 600	20a/	647
2 good typewriters		3 000	7	566
				23 996

Source: discussions at College, January 1982

Note:
a. We have taken the life of this equipment as 20 years, an unusually high figure, but a reasonable one in view of the fact that the equipment was already 16 years old.

In Table 5 we summarise the recurrent fixed costs for Luanshya, that is those recurrent or annual costs which will not vary with the number of students enrolled. Thus we have a total annual fixed cost of (23 996 + 282 459) or K306 455. It is more difficult to analyse the variable costs, as we do not know how to allocate them between the students in supervised centres, whom we assume work more assiduously than the others, and the rest. This affects, for example, the amount of print costs that should be attributed to one group rather than the other. We have therefore tried to calculate a cost per student by adding up the elements which go into his or her learning package, rather than by breaking down the variable costs from NCC's total outgoings.

NCC does some of its own printing, and puts some of it out to private printers. The outside printers charge, on average, K0.23 per lesson; each course has 30 lessons, and a supervised student can be expected to work through ten lessons a year for three years. The other costs to be met for each student are: marking fees, and we know that in 1981 NCC spent K91 329 on part-time tutors' fees for marking (this does not represent the total marking cost as full-time staff at the College do some marking; the costs of that work are, inevitably, included in the fixed rather than the variable costs); and the costs for supervised study centres themselves.

Table 5 : Recurrent fixed costs at NCC Luanshya

Currency : 1981 Kwacha

Salaries	188 792
Travel	850
Petrol	2 507
Vehicle maintenance a/	3 400
Radio programmes	
Production - 30 x 6 x 50 = 9 000 b/	
Script/fees - 30 x 6 x 20 = 3 600 c/	
Transmission - 30 x 13 x 59 = 23 010 d/	35 610
Electricity and water	2 000
Telephone e/	10 000
Sundries	39 300
	282 459

Source: discussions at College, January 1982

Notes:

a. In the absence of a figure from NCC, we have taken 10% of the capital cost.

b. Production costs estimated at K50 for each programme; there are 30 programmes a year for each of 6 subjects.

c. Fees for script-writers and speakers estimated at K20 per programme.

d. Programmes are repeated. It is reported that 13 are transmitted in each of the 30 weeks when NCC broadcasts, at an estimated cost of K59.

e. No figure available from NCC, so K10 000 estimated.

As JS students follow six courses, the costs for their printed materials in a year can be estimated at 6 x 10 x K0.23 or K13.80. Leaving aside, for the moment, the cost of the study centre itself, we can see that the cost for each student will therefore be a proportion of the variable costs, K91 329/11 794 or K7.74, for marking and K13.80 for print, assuming that the external printing cost can stand as a reasonable approximation for both internal and external printing.

If we assume that each of the 33 000 students should be allocated the same proportion of fixed costs, then the fixed cost per student is 306 455/33 000 or K9.29. It may be more realistic to assume that two-thirds of NCC's energies go on its supervised study groups and therefore to allocate 2/3 of the fixed costs to the supervised students. In this case, the cost per supervised student will be 2/3(306 455)/11 794 or K17.32. Thus we have high and low estimates for the fixed cost element within the cost for students at supervised study groups.

We can, similarly, make high and low estimates for the costs involved in attendance at supervised study centres. Originally, most study centres operated out of school hours and in primary school buildings. The only direct cost was the payment made to supervisors at the primary schools. As the centres were using school buildings that would otherwise have been lying idle, it is reasonable to argue that there was no opportunity cost for the building. Thus, to estimate the cost per student on this basis, one can take the total paid by NCC for part-time supervisors, divide this by the number of students, and say that is the cost per student for the activities of the study centre. In 1981 NCC paid K35 100 in supervisors'

fees for its 11 794 students, or K2.98 per student.

There is one further cost which should be brought in. Where a school houses a supervised study group, the head assigns one teacher to look after this in the afternoon and reduces the morning teaching load for that teacher. We should therefore take account of the value of that morning teaching which is lost to the school. If we assume that there are 80 students in a supervised study group, that a teacher has a remission of one-third of his time because he is supervising, and that the salary rates at Mufulira, the school discussed below, are typical, then the cost per student will be 1/3 x 4 070/80 or K16.96.

Recently, as we have seen, some centres have been run, in effect, as part of the school to which they are attached. The Mufulira school is an example. Here, in discusson, the staff estimated for us that the supervised study group took about 100 teacher hours of work of each 680 hours that the school has in each 17 weeks (17 x 8 x 5). They had 189 students. Their running costs were estimated at K107 798 per year, of which K69 198 were for salaries. The supervised study group had part-time use of five rooms out of 20 in a building whose current replacement building cost was estimated at K250 000 to K300 000. Taking the higher of these figures, assuming that the school has equipment whose value is 10% of the building, and that the building costs should be amortised over 50 years and the equipment over ten years, we get the following result:

Cost of building @ K300 000 over 50 years @ 7.5%	23 122
Cost of equipment @ K30 000 over 10 years @ 7.5%	7 284
	30 406 per annum

As the study centre had only part-time use of one quarter of the building, it seems reasonable to attribute one eighth of these costs to correspondence students, which gives a cost per student of

$$\frac{30\ 406}{8} \ / \ 189 \text{ or K20.11}$$

To this must be added running costs. On a proportionate basis, they amount to

$$\frac{100}{680} \times 107\ 798/189 \text{ or K83.88 per student.}$$

This gives us a total cost for supervision of K103.99 per student.

We can now, therefore, put together a high and low estimate of the cost per student in a supervised study group (Table 6).

Table 6: Estimates of costs per SSG student

Currency: 1981 Kwacha

	high estimate	low estimate
NCC Luanshya fixed cost	17.32	9.29
Printing cost	13.80	13.80
Marking fees	7.74	7.74
Supervisors' fees - met by Luanshya	2.98	2.98
Supervision costs - met by centre	103.99	16.96
Total	145.83	50.77

5. WHAT DO THE COSTS TELL US?

We can thus assume that the cost per student in a supervised study group lies somewhere between K50 and K150 a year; the difference between the two figures represents mainly the difference in the amount of face-to-face support to such students. In order to put these figures in context, we need to compare them with the costs of regular secondary schools and, if possible, to compare the results of the two systems.

Ministry of Education and Culture (1982) figures show that the Government of Zambia was spending K24 007 200 of its 1981 recurrent expenditure on secondary schools with a total enrolment of 77 685 students, or K309 per student. A recent school building for 480 students cost a total of K2 million. If we assume that three-quarters of this cost is for the building to be amortised over 50 years, and one quarter for equipment to be amortised over ten years, then we get an annual cost of K115 609 (building) + K72 843 (equipment), making a total of K188 452. At 480 students, this gives a cost per student of K393, making a total cost per student of K702.

All these estimates, for NCC or regular students, omit the opportunity cost to students of the time they spend studying, and do not include anything for the operating costs of the Ministry itself.

We can therefore conclude that the cost per student at a supervised study centre is between about a quarter and a twentieth of the cost at a regular secondary school.

It is often more important to look at the comparative cost per successful student, but this presents us with two major difficulties. First, we lack adequate data on the examination success and failure rates of students of the National Correspondence College. As many such students enter individually for the examination, it is extremely difficult for the College to assess its examination pass rate. Second, in comparing the two groups we are not comparing like with like: generally, those who study through NCC are those who performed worse at their previous stage of education and so may be expected to perform worse in their secondary level examinations.

We do know, from studies of other institutions, that correspondence students tend to do worse at examinations than students in full-time education, and that the attrition or dropout rate is higher. (In recent years, the dropout rate between forms 1 and 3 in Zambian secondary schools is negligible (cf. Ministry of Education and Culture 1982, p.75).) We can, therefore, ask what sort of failure rate and attrition rate the supervised study group student must suffer for the cost per successful student to rise as high as the cost per successful student in a regular school.

Recent Junior Secondary results for school children show that two-thirds of these can expect to pass. In other words, if we define a successful student as one who passes the examination, then we need to educate - and pay for - 1.5 students in order to get one successful student. The annual cost of educating a successful student at secondary school is therefore not K702 but K1052.

If we take the lower estimate of the costs of study group students, this means that with a successful completion rate of 4.8% the cost of getting a JS pass through the National Correspondence College would be the same as at a regular secondary school. With the higher estimate, the figure is

13.9%. In other words, if only 5 of each hundred students who start on their courses - or 14 at the higher estimate - pass their examination, then they will do so at a lower cost to Zambia than that of going to regular secondary school.

Unfortunately the data are not available to say how near the College is to meeting such targets. In their 1978 report dropout was reported as being at 25%; a pass percentage of 33% was reported in science, but figures were not given for other subjects. Siaciwena (1981, p21) reported JS pass rates of 17.6% between 1966 and 1970 and 20.6% for JS and GCE combined in 1976. But the GCE 'O' level pass rate was as low as 4.8% in 1978 and 'on average the pass rate for supervised study groups was 5 per cent between 1972 and 1977, though of late some centres have produced 50 per cent pass rates'.

The figures are meagre and difficult to interpret, but we can draw two generalisations from them. First, the difficulties under which students have to work, and the shortages which hamper the work of the College, combine to make the correspondence route a difficult one to formal qualifications. But, second, the varying pass rates which have been reported suggest that the methods used by the College have the potential of offering a useful alternative to formal schooling, at least for some students. While it is only human to be concerned at the high dropout and failure rates, the success rates reported from some centres, and the modest costs, suggest that with slightly more generous resources, and with the quality of supervision already achieved in some groups, the College could make a markedly bigger contribution to the Zambian system of secondary education.

6. CONCLUSION

The National Correspondence College of Zambia is now a well established institution, with over fifteen years of experience behind it. By providing correspondence courses, both for adults and for primary school leavers, it has opened a route to formal qualifications for people who could not otherwise have obtained them. More recently, its development of supervised study centres has given its correspondence students some face-to-face support which should help them in their study. That programme has also done something to widen the responsibility of schools so that they cater for both the fortunate students within their walls and the less fortunate ones who are, for most of the day, outside them.

In recent years, the College has been hampered by a shortage of resources, which ultimately reflects Zambia's difficult position in the world economy. As a result, the formal reports of the College, and the accounts from visitors there and conversations with their staff, tell of battling with old machinery, with a shortage of vehicles, and with a scarcity of books and paper - all the basic tools of teaching. The College's success, in reaching and teaching students in their tens of thousands, needs to be set against that backcloth.

We have tried, too, to put its teaching in an economic context. Like other distance-teaching institutions at this level (cf. Perraton 1982), the College provides an education which is much cheaper per student than the regular, full-time, alternative. It is cheaper partly because of the economies of scale which distance teaching makes possible and partly because students are supervised in large groups by unqualified, or under-qualified, supervisors rather than taught by teachers. It is more difficult to say how the costs per successful student compare, but the figures are such that the College could well teach students, and get them

through their examinations, at a lower cost than that of regular schools. There is, however, a price here, although not one to be measured in Kwacha or pounds: many of those who start on correspondence courses drop out or fail on the way and their disappointment is a price which needs to be set against the value of their fellow students' success. The search for better ways of supporting students - in which Zambia's development of supervised study groups is an important exemplar - needs to go on.

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